



PTO/SB/36 (07-05)

**PRE-APPEAL BRIEF REQUEST  
FOR REVIEW**

|                      |                       |
|----------------------|-----------------------|
| Application Number   | 10/629,498            |
| Filing Date          | July 29, 2003         |
| First Named Inventor | Anthony J. Lochtefeld |
| Atty Docket Number   | ASC-061               |
| Art Unit             | 2891                  |
| Examiner             | Bradley Smith         |

**CERTIFICATE OF MAILING OR TRANSMISSION**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature

Name (Print/Type)

AGNES DINEEN

Date

February 28, 2007

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor

Signature

☐ assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)

Natasha C. Us

Typed or printed name

☒ attorney or agent of record

Registration number 44,381

617-570-1806

Telephone number

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34.

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

☐ \*



PATENT  
Attorney Docket No. ASC-061

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANTS:       Lochtefeld *et al.*  
SERIAL NO.:       10/629,498       GROUP NO.:       2891  
FILING DATE:       July 29, 2003       EXAMINER:       Smith, Bradley  
TITLE:             SELECTIVE PLACEMENT OF DISLOCATION ARRAYS

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**COMMENTS ACCOMPANYING PRE-APPEAL BRIEF REQUEST FOR REVIEW**

This paper is submitted along with a Pre-Appeal Brief Request for Review in accordance with the Official Gazette Notice dated July 12, 2005, and a Notice of Appeal in response to the Office action mailed by the U.S. Patent and Trademark Office on November 29, 2006. A check for payment of the fee for filing the Notice of Appeal is submitted herewith. Applicants believe that no additional fee is required for this submission to be entered. However, please consider this a conditional petition for the proper extension, if one is required, and a conditional authorization to charge any related extension fee, or any other fees, necessary for entry of this submission to Deposit Account No. 07-1700.

Applicants' **Remarks** begin on page 2 of this paper.

### **REMARKS**

The Examiner has failed to consider an essential element of independent claim 55 in rejecting that claim and claims dependent therefrom under 35 U.S.C. § 103(a) over U.S. Patent Publication No. US2003/0089901 to Fitzgerald ("Fitzgerald"). We therefore submit that the rejection is improper and that review is appropriate pursuant to the Official Gazette Notice dated July 12, 2005.

Claim 55 recites a method of selecting a placement of misfit dislocations that includes forming a regrowth layer. The claim qualifies the regrowth layer as having "a thickness defining a distance between a top surface of the second layer and the misfit dislocations corresponding to the selected placement of the misfit dislocations, such that a device formed over the second layer is substantially free of misfit dislocations." The Examiner contends that Fitzgerald teaches forming a regrowth layer, but completely ignores the entire wherein clause. In particular, the Examiner has not provided a reference that teaches the formation of a regrowth layer having the recited geometry and keeping a device formed over a second layer substantially free of misfit dislocations. We respectfully submit that this constitutes clear error.

Fitzgerald discloses forming a plurality of layers over a planarized substrate, referring to the layers as "regrowth" layers. Fitzgerald, however, is silent about dislocation densities in devices formed in his layer structure. As those of skill in the art recognize, merely forming a regrowth layer by no means assures that a device formed thereover will be substantially free of misfit defects. Claim 55 therefore recites a specific geometry (*a thickness defining a distance between a top surface of the second layer and the misfit dislocations corresponding to the selected placement of the misfit dislocations*) and the consequent property of the regrowth layer (*such that a device formed over the second layer is substantially free of misfit dislocations*). Fitzgerald discloses neither the geometry nor the property. Specifically, Fitzgerald does not teach placing misfit dislocations as recited in claim 55, and does not teach a regrowth layer that ensures the substantial absence of misfit defects in overlying devices. The Examiner erred by completely ignoring these claim limitations.

**CONCLUSION**

We respectfully submit that, as set forth in the foregoing remarks, there are clear errors in the Examiner's rejections.

Respectfully submitted,

Date: February 28, 2007  
Reg. No. 44,381

Tel. No.: (617) 570-1806  
Fax No.: (617) 523-1231



---

Natasha C. Us  
Attorney for Applicants  
Goodwin Procter LLP  
Exchange Place  
Boston, Massachusetts 02109